

Transcription of an interview conducted 4 April 2019

Interviewee: PABLO FEITO BOIRAC (PB)

Interviewer: JAREK ZABA (JZ)

Tolworth, England

Transcription: JAREK ZABA

[00:00] JZ: OK erm. Alright. Er just the formalities when we start -

PB: Yeah.

JZ: - these things. Can you just er say your name and your date -

PB: Yeah.

JZ: - and place of birth if that's alright.

PB: Yeah. So my name is Pablo Feito. Boirac actually. I was born in Spain but I'm er half Spanish er half French. So I've lived in Madrid for most of my life. But because I have this French err nationality somehow I've worked and lived as well in France er on and off. Er. For the past, I don't know, 20 years or - yep.

[00:33] JZ: Cool. Cool. Erm. Why don't we start talking about erm - upbringing in Spain. Is there - in Spain is there - where in Spain was it sorry?

PB: So it's Madrid so it's as well big city capital busy er yeah.

JZ: Do you have things like allotments in Spain?

PB: Er no I don't think is a movement, at least when I was growing up it wasn't as common as here. Er. Might have to do with somehow **[01:00]** historical - maybe context. So the fact that this is an island somehow requires the production of vegetables, right? And I think after and during the Second World War there was a massive movement, no, of we have to produce our own food otherwise we're not gonna make it. Er. So I think that historical err - the point developed onto what we know now. Is that it's quite spread out. Very well organised. Everyone knows about it. Everyone respects it and there is a continuity. In Spain somehow there is more of private er vegetable gardens. You'll have your little plot next to your house maybe or on your neighbour's little piece of land. But they're not communal. So it's not - you have your plot next to your neighbours and t-t-t like this no, that creates somehow a greater group of producers than in Spain. Yep.

[01:57] JZ: Sure. And on those little plots would you - er [02:00] would the vegetables be different to what you grow over here? Would it be similar sort of things?

PB: Similar sort of thing. I mean there is some things I guess that are er better here. Er. Than in Spain. Er like the winter - winter vegetables and colder vegetables like - I guess they're better here than in Spain and then warmer and vegetables that need more sun will live a bit better. But I think it's basically the same. Like you can get more or less the same things in both places. More or less.

[02:28] JZ: Sure. Sure. Yeah and you mentioned the historical context there. Dig For Victory was the campaign in Britain.

PB: Exactly.

JZ: Er. And I guess the fact that Britain's involvement in the Second World War was very different to Spain's as well.

PB: We weren't.

JZ: Yeah.

PB: Yeah we were living our own civil war so we were dealing with our own problems.

JZ: It would be an interesting study. To look at different types of wars and whether that affects how people grow fruit and veg. I'm sure -

PB: Absolutely.

JZ: Because a civil war probably has a very different -

PB: Yeah character. Yeah it's probably more - I mean probably more self [03:00] destructive, right, it's a civil war so there is probably no time to prepare for - you know what I mean.

JZ: Yeah.

PB: There is - like the enemy's already inside.

JZ: Yeah.

PB: You know what I mean rather than here, you're like no, let's protect our boundaries. Let's grow in so we'll be safe but in a civil war - like your neighbour is your enemy right?

JZ: Yeah.

PB: So it's no -

JZ: Yeah it's interesting. Interesting hypothesis.

PB: Mm.

JZ: Mayb-may-maybe take that up with - with some academic in the future to look into.

PB: Interesting.

[03:25] JZ: Erm. But yeah so how long ago was it you made your way to the UK?

PB: Er so I came in 2012. June 2012. So this is seven years ago right? So it's a while - while back. Er. London I think is a good place, it makes you feel at home. So it's quite easy to arrive and soon after you feel like a Londoner. You can call yourself a Londoner because everyone has arrived here somehow. There is very few err - like full on Londoners. As is there [04:00] is not many Madrillians either, right, because everyone goes to big cities. Erm. So yeah seven years. And when I arrived here I came from the countryside. So I started a little project with some friends in the north of Madrid. Erm. The biggest city next to the town where we moved in is er Segovia. And we started er sap business. So we rented 15,000 trees. And our job was to get the sap out of these trees and then sell it by the tonne. Right. Er so obviously there you are in a rural area er - our village was dunno maybe 150 people or something, really tiny. Mainly old er rural erm inhabitants, no. Er. So that was somehow the first time - so this is, yeah I guess nine years ago. First time when I had my piece of land, no. So we had our [05:00] 15,000 trees. Massive forest. And then in our house we had a little garden. Kind of what I was describing, right, this private vegetable garden. Er so that was - somehow that first connection er with err the - owning and I put some errm -

JZ: Inverted commas.

PB: Yeah vertical commas. Cos you don't really own it. No you use it there and err - and then when I came here. I really really really missed the soil. Y'know. Just the fact of getting dirty. Being on the - no, the activity of being on the garden. Rather almost than the production of the fruit and veg. Erm. So I

applied for an allotment actually. Errr. Or actually no I did not apply. I checked for it on the Kingston allotments, for the one that's in Tiffin School. The girl - girl school.

JZ: OK.

PB: In Ham. Towards Ham.

JZ: Sure. Yeah, yeah. [06:00]

PB: Er and there was like a three year waiting list, yeah. So I was like - this is a kind of a - an impossible - I just came to do my BA which is three years. What's the point of applying now, no. It turns out that I should have. Then I would have an allotment but anyway. Erm. And [pause] one day I was in university and I met er a member of the administrative staff of uni. And we were going through some pictures from somebody else's portfolio. We had some little task to do - organising a room or something where you had to spend a bit of time with someone so we started chatting. And it turned out she had errr a garden, right, in her backyard. And she had a square metre plot for vegetables. Err. So I thought well maybe she wants a h-a hand, no? And I can offer her - prepare half of your [07:00] garden - err and then I'll just get some er vex- vegetables in exchange. And I'll be able to use the space as well. She agreed. Tiny bit y'know erm - not fully convinced at the beginning y'know. But little by little I went several times. Help etc etc. So that was how I got my first plot of land - again here in England. And one of the conditions that I put forward was to have chickens as well so that we could have a closed circle, right. So the leftovers from the vegetables would go to the chickens and then the waste of the chickens would fertilise er the soil and then the chickens would give us the eggs as well and to like this way of paying, no, for us taking care of them. Erm. Again er Doreen - this lady wasn't very convinced - she was like oo, I don't know. And now every time I go and [08:00] see her she thanks me every day. Thank you very much for giving me my - it porridge, warm porridge in the morning. They eat much better than some people around.

JZ: Sure.

PB: So is a good - good move. So that somehow the context of me getting - arriving in England and wanting some soil with some plants. No relating with - and then when I started my masters. So this is 2015. Erm. Robin did the first connection with er the university. So they started thinking on how can we build structures that are gonna have a proper purpose rather than just building a structure just for the sake of the exercise. Right. Erm. So when Robin came in, er, obviously myself and my peers got actually really interested in this area of making real things rather than er castles in the sky that we call, no, that's it's always this designs [09:00] that are un - maybe you can never make them, no, they're just - and I guess that was the first connection with the Community Brain and well this Farm of Futures. The - all the little projects that sprung out of the Community Brain. And now here we are fully [mersed].

JZ: Sure.

PB: Erm yeah.

[09:23] JZ: And the erm - that little err erm - plot you had with the - with the lady you mentioned. Er it just struck me that you were talking about the chickens and the fact that -

PB: Yeah.

JZ: - err - their waste would help -

PB: Yeah.

JZ: - the vegetables -

PB: Yeah.

JZ: - and then the leftovers help the ch - is - how important is the kinda concept of sustainability to you?

PB: Well it's extremely important. It's extremely important. Erm. I believe that we used to be err hundred percent self-sufficient. Or erm renewable or in balance with nature back in the day, right, when **[10:00]** our great grandfathers used to live out of the land and there was no - and the world has shifted towards a disposable world, right, where everything is disposable, no matter what you have. You get it and then you lose it. And somehow that has never suit my way of thinking and of living so I've always - since I was a kid er recycled. Looked in the bins. Looked in containers. Checked something - oo, maybe with that chair I can make something else. Obviously back in the day when I was younger it somehow you don't think about it, you just do it because you like it, right? But now there is er for sure like an intention, an interest in this is the way forward. We either start thinking differently or we just can't go forever, right. There is many statistics, right, that they say if all the world would live like Londoners we would **[11:00]** need five planets.

JZ: [Laughs]

PB: Well we don't have five planets so we either do it or there is no - no turning back. And I think as well there is er an intellectual er beauty in - in reusing things. Right. So there is a history of a material. And by reusing it you are somehow validating and giving some value to that history. So the timber that we have just here next to us - somebody had to go to the forest, cut that tree down, shape it, etc etc. And that's everything that we use. So I think is good show of respect that rather than just disposing it I'll use it and I'll transform it into something else.

[11:48] JZ: Sure, sure. And just going back to when you were talking about er - coming to the UK and realising you wanted to get your hands dirty again.

PB: Mm.

JZ: I mean -

PB: Mm.

JZ: - is that - that kind of outdoorsy-ness - [12:00] has that always been with you? Is that something you can relate back to childhood? Is there a reason why you have that within you?

PB: Yeah I think it's probably - I've thought a lot about this. I think it's probably climate based. So I was born in er country where we have - I don't know, it's 250 days of sun or something. It's just mad, right. Madrid is just sun all the time. So the outdoor is part of our - our homes in a sense. So the public space - it's our space. Right. So since probably the teenager - teenagers I've spent a lot of time outside. I've gone a lot to the mountains. I've done a lot of mountaineering. I've done a lot of activities that are normally outdoors, no. I guess that's probably one of the reasons why now I kind of er look for this, right.

JZ: Mm-hmm.

PB: As that's how I was raised, yeah.

[12:59] [13:00] JZ: Sure, sure. Erm. So erm - so o- have you ever actually had - other than your sort of work here and your -

PB: Mm.

JZ: - er plot with that lady, have you ever actually had a plot of your own on an allotment site or er -

PB: No. Three - three years waiting list.

JZ: Yeah.

PB: Which put me off. And er then yeah. I-I just haven't - yeah - I just haven't er - haven't applied again.

JZ: Sure.

PB: And I guess now -

JZ: Now there's no need.

PB: There's no need, yeah.

[13:27] JZ: Erm. Actually that's a point - so you came here to study?

PB: Mm-hmm.

JZ: What did you come here to study?

PB: Architecture.

JZ: Architecture, right OK.

PB: Yeah.

JZ: OK. And is your masters as well in that?

PB: Yeah. So I finished all my - my degree, yeah.

JZ: Yeah.

PB: Er. So yeah. Now once - I finished two years ago. Er. I worked er for different architects. Er last year. And then six months ago, eight months ago, I started the little company. Er with some of my colleagues from university. It was called 121 **[14:00]** Collective. And it's a design and make er studio or [inaudible]. So we are exploring really at the moment what is our architecture. What is to be a designer. What is to be a maker. But we do believe that err working for and with the community is what really makes us err special and what really makes us interested in doing architecture. And making. Right. So I guess that's one of the err bounds with the Community Brain, right. So we started in university as students to collaborate with a Community Brain small project. Then we moved on as professionals and because it's the - the source of our ideas are er drawn from the community brains - right. **[15:00]** It just makes sense to still collaborate with the Community Brain and 121 Collective.

[15:06] Sure. I-I only ask about the studying and the profession just because I w-I wondered whether this sort of world was anything you were ever -

PB: Mm.

JZ: - interested in professionally.

PB: Mm-hmm.

JZ: Because architecture I guess is on a different - in a different field. Erm.

PB: It is and it's not. I'm not sure. If you ask some architects they'll tell you that it's very broad. So that architecture deals with space and with how we use er the world. In a sense, around us, right. Whether it's built. Or whether is natural. So I guess I feel this has a relationship with architecture, right. So we just installed a window for example. Er. And well at the end of the day a window is part of a building, right. Er. [More] the set we have for the aquaponics, whoever made this first er attempt to set up the - **[16:00]** the aquaponics. Had put this columns that somehow sit around the aquaponics erm pot. And it's right in the middle. It's right on the way. You can't circulate around just because you have those columns. So when we came we said OK we're gonna change this. We're gonna attach it to the ceiling. We're gonna put some kind of pulley system so you can lift them up and down and then we get rid of these things so

you can now have the full circulation. And I think these things are little details that the architecture trained eye - you start realising. Oh, ah, I can do this, I can do that.

[16:37] JZ: Makes sense. That makes sense, yeah.

PB: Mm.

JZ: Erm. In terms of just generally growing. Do you have -

PB: Mm-hmm.

JZ: - particular vegetables that you like to grow specifically?

PB: OK. Mmm, OK, interesting. Erm. I like -

JZ: Or fruit of course.

PB: I-I really like but I think it might be a bit not actually good reason. But I like my courgettes. **[17:00]** Because they are savages. Y'know. They will just grow anywhere. They'll just produce as much as they can. And they're beasts, right. They are like good plants. It's err - will just keep going. And I think that's just a good sign in a plant, no, she's like well trained.

JZ: Yeah.

PB: Erm. But then for example - this is another reasoning, no, like corn. Er. That doesn't need bees to be fertilised, right, and to get the corn out of the thing, I think that's actually another interesting thing, right. And it's kind of erm - a good reason to have him around. No? So I guess each plant has good things and er bad things. For example basil, no, which can be used to repeal - repeal, to erm - scare some insects. So if you plant your basil with your tomatoes some of the insects are not - **[18:00]** so I guess I would struggle choosing a favourite. Yeah, I would struggle choosing a favourite. Yeah.

[18:09] JZ: Is there a least favourite? Like one that's an absolute bastard to -

PB: So I think er - rather than the work that you have to put in to - to take care of them, which they all require some kind of energy. Er. I will go more for flavour and it's coriander. Which I hate coriander -

JZ: [Laughs]

PB: - I'm that half of humans that don't like coriander. So - but nevertheless y'know. It's - they're all amazing and I'm no - no real expert. Er in er - in plants. I know my little things, little things here and there. Er so if anyone brings me a plant that I've no idea about I will go straight on and I'll be more than happy to - to learn from it. To plant it. To try to test.

[18:55] JZ: There's none of that's sort of you've had a thing where they just won't grow.

PB: They will just won't grow. **[19:00]** Er. Trying to remember.

JZ: [Laughs]

PB: I planted some erm - again, there, what are they called - cucumbers. Which are a bit on the same of the courgette, right. Er but they did not work at all. I got like the smallest - I don't know exactly why but they didn't - they didn't work properly. Erm. Anything else, really. For example asparagus. I never tried because I've always been told that it's a very hard plant and it requires two seasons. So you plant it the first season, that one you can't collect, you have to collect it the season after. And because I'm a nomad. Or I've been a nomad for I dunno how long now. So I've lived in Spain, I've lived in France, I've lived around, I don't have a base. It's always - I've never really committed to a plot - probably because once you're gone, what happens to that, right. **[20:00]** Erm this project is different. Because once I'm gone

there'll be a lot of people who actually can enjoy the place so my effort is just not gonna be in vain, right. There'll be someone else who will be able to - mm.

[20:14] JZ: Erm. In terms of this place. Er t-the sort of Tolworth Main erm allotment site. Have you - d-d- have you got to know sort of people on other plots? D-d-

PB: Little by little.

JZ: Yeah.

PB: Not many. But little by little. Er. We've just been here maybe at least less than a year. So we haven't been here enough I think. Er and regularly enough yet. Er to actually start some err - some proper relationships, no, with - with the rest of the neighbours. But there are some, stop, talk - hey how are you doing. Everyone is very friendly generally.

[20:51] JZ: Cos the reason I ask is because we've interviewed some Tolworth Main plot holders and other plot holders in the borough who have been here 30 odd years, whatever.

PB: Mm-mm.

JZ: [21:00] Erm. And er sort of consistent thing that they talk about is how the culture has changed in -

PB: Mm-hmm.

JZ: - early in - over the years. So there's a lot more women owning their own plots now.

PB: Yes, yes.

JZ: Erm. And a lot more people from other countries.

PB: Ahh.

JZ: And you are an example of that I guess.

PB: Yeah.

JZ: Erm. Even if you're not an owner of the plot.

PB: Yeah.

JZ: But you are - you are helping to running it. So yeah I just wonder if you - if you've had interaction with people from different countries or whether it's sort of mainly British people you see round here or -

PB: I -

JZ: Or if there's anything you've noticed.

PB: I can't tell. I have noticed there is a few woman. I can not say if there's more or less -

JZ: Yeah, of course.

PB: - than before. But there is probably a 50/50. So that's - I can see is truth. About nationalities I haven't spoked enough yet with everyone. To see where everyone is from.

[21:49] JZ: Sure. In terms of the way allotments er play a role in - in society, British -

PB: Mm-hmm.

JZ: - or-or further beyond. I mean how important do you think it is for us to be [22:00] looking at growing our own - I mean you spoke about sustainability earlier.

PB: Mm. Mm.

JZ: But just gen-more generally in society. W-what - why is it important or positive -

PB: Mm.

JZ: - for people to sort of -

PB: Mm-mm.

JZ: - approach food -

PB: Mm.

JZ: - in this way?

PB: Erm. There is probably several - several answers to the question. But I think one very important is they say you are what you eat. Right. Er so if you don't know where your food comes from there is something wrong, right. Er. Maybe it's because we're getting so detached from the world, no. From real world and we're all very busy on our careers or on things that I'm not really sure actually what they are, but on making our money to - I dunno exactly what but very focused that we forget er that at the end of the day we're part of this world. So we should somehow [23:00] know where our organisms gets their energy from. And I think nowadays you can see it on kids, no, when you deal with 8 year old, 5 year old, 10 year olds and you ask them do you know where this comes from? You - can you draw the leaf of the tomato plant? What - is a plant? Doesn't it come in a plastic er thingy wrapped. No right actually comes from a plant. Same with animals. Same with all the things that we use right. So I think the culture of allotments facilitates that. So if you plant a seed and you see it growing then all of a sudden you'll have way more value, you'll - it's not about how much it costs. Is about how much er - I'm gonna say world energy it's put onto that seed so that you have tomatoes. Or cucumbers. Or whatever, no, beans or whatever the veggie or the animals as well, no. [24:00] Where do eggs come from? Well they're not on a six pack box or twelve pack box, right. They come from a chicken that you have to feed, that you have to treat well. That you have to - mm. There's an interesting experiment I did when I was living in the countryside before I came here. I said to myself if I'm not capable of killing the chicken or the lamb that I'm gonna eat I'll become a vegan. Yeah, because otherwise what's the point? Like just doesn't - it doesn't match, no, there is some kind of a - of a contradiction in your head if you - no. Er. Other people might say no, I don't mind but that's fine, that was my point, no. So we had their animals - we had a little farm with chicken, with rabbit and so on. And we produced our own meat. Y'know. And then you really see the value of a chicken, right. And the effort that it requires to make him grow [25:00] so he's not sick, he has - no. So it's very important I think.

[25:05] JZ: So you found you were capable of killing the animals?

PB: Yeah yeah yeah.

JZ: Yeah.

PB: Yeah yeah yeah. Yeah.

JZ: So you're not a vegan now?

PB: No I'm not a vegan. Erm. I-I do not believe in industrialisation therefore I don't believe in industrialisation of fruit and veg, of animals, of bikes, of sofas. Whatever it is, right. It's not about being a vegan, a vegetarian, a carnivore, an omnivore, no. My question goes on how is that produced rather than what the thing is.

[25:38] JZ: And do you think these kind of actions, discussions more important now with time of - er deep environmental challenges and a crisis?

PB: Yes. We definitely talked way more about it, right. And I think we can feel that our generation is way more interested [26:00] than the generation of our parents right. Or even our great gr- not probably, that's a bit too far - but our grandparents. Y'know the kind of live the boom of everything that we have

now, no. Er. So for sure generations that are coming behind us are gonna even have er greater spirit. Er to preserve the planet. To change the ways we produce, to change how we do our commerce maybe. Not just transporting a kiwi from New Zealand all the way - I dunno, it doesn't seem right, no. And I do eat these things, right. I eat Spanish tomato and because we're forced into the system in a sense. Mm.

[26:41] JZ: Sure, sure. Erm. Right let's talk about er - just to sort of round off, talk about Community Brain and this, and ShedX -

PB: Mm-hmm.

JZ: - and the suburban farm - first of all, what is the suburban farm?

PB: So the suburban farm springs out of the erm - what is it, the farm of futures. No, what is it called -

[27:00] oops. Er -

JZ: The Museum of Futures?

PB: The Museum of Futures. As on the names. Kind of just - so the - this space is er leased by the Community Brain to the council. Erm. And somehow it's been used as erm storage place really. For the past - I dunno how long, but for a little while. And it has a lot of potential. So this is a maybe where the architecture comes in, no. So we saw this place while we were working with Robin as students. Er. And th-the room surprised us, no. Like we were like wow! Y'know this has so much potential just in the entrance of the allotment which means that it has a strategic position as well, no. Er. And Robin er - had always in his mind to **[28:00]** use this for something, right. To get something out of this place. To be able to er regenerate it and give something back to the allotment community, right, and to the Tolworth greater community as well but we have to start small with our neighbours. Erm. So through conversations and through discussions as well and erm brainstorming er with Robin, Georgia, er Salah who's my business partner, myself and a few others. Erm we thought it would be a fantastic idea to refurbish err this er space and be able of design it as a community project. Yeah. So rather than us as architects arrive here and say this is what you guys need to have a cool allotment. Try to clean the space so it's a natural space. Then organise a series of er design workshops. Bring the allotment owners **[29:00]** in and whoever from the Tolworth community er that wants to come and join. And through a series of workshops that can be erm - first idea, no, we paint a wall all in white. We'll get some paintbrushes and we'll start scribbling. Yeah. But squares, circles, a tree, a text. And with this exercise we'll transform this beautiful space hopefully in sharing skill facility. So that everyone that is interested in learning as I'm interested in learning beehive erm knowledge er beekeeping knowledge. Er and somebody else might be interested in learning how to weld. Oh you know about beekeeping? I know welding. Shall we trade? Let's trade. And it's a way of er creating really - creating value out of groups, no, **[30:00]** because what - what we have - what it's really valuable is knowledge. And our capacity to work together. Yeah as humans. And if we're capable of facilitating that in this space then I think my - my goal is achieved, no. And then I'm - I would be more than happy no matter how it looks if architecture is beautiful, if the details are wonderful, that's kind of secondary in my - in my interest. Erm. So I think that's kind of quite - quite a general - then there's a lot of - a lot of little specifics, no, but I guess that describes it quite broadly what - and poetically a bit as well what it is.

[30:43] JZ: Yeah. Sure. I mean in terms of the specifics I mean what - what is this that we sat next to right now?

PB: So erm. Within the Farm of Futures which - that's the new - the new name.

JZ: Oh OK. Farm of Futures, right, OK.

PB: Farm of Futures.

JZ: Yep. [31:00]

PB: Erm. One of - of course we're - our setting is an allotment so somehow one of our - our key interests and I guess one of the key elements that links us to everyone else here is growing. Right. Growing plants, growing vegetables, growing fruits, grow-growing. And probably we can even expand it more so we'll do the food production. How do you produce food locally? Err. And one of the greatest questions is how do we produce food locally in the cities? Right. Because in the farmlands we've all done it for centuries. It's cool. Nobody has any doubts. There is a lot of methods that are proved and work. But in the city, due to the lack of space we have to find new ways of growing. And the aquaponics system is err not new. Er I think Egyptians used to have [32:00] aquaponic methods of - of growing so it's actually quite an old technique.

[32:05] JZ: Do you wanna just define what aquaponics is?

PB: Yeah. So aquaponics is growing erm - root plants. Or - not root plants. Growing plants, vegetables. Er using only water er as somehow the - the transporter of nutrients and the - the substrate, right. So in the - the soil. The soil is what has those nutrients, right. So that's why you compost, right. You add nutrients onto your soil. You mix. And then the water is the responsible of getting er those nutrients absorbing and passing them onto the - onto the roots. In this case we apply all the nutrients which they are different ways of doing - I'll go through them now. Or through the one we're gonna use [33:00] maybe. Er different nutrients onto the water. And then you pump that water onto your roots and then your roots absorb those er nutrients from the water. And that water is reused and it goes back again and is a circle. So you use theoretically less water, because it's a closed loop so it's always the same water. And you use less surface as well because you don't need erm the same amount of surface and depth than you would need on a - on erm normal vegetable plot. So the aquaponic system that we're using here er has some volcanic pebbles. Er so it's a very porous - porous?

JZ: Er, porous, yep.

PB: Porous material.

JZ: Mm-hmm.

PB: And the water - it's pumped from a container that we have. Erm. With 800 litres of water. And it's pumped onto another [34:00] container that we have full of this pebbles, volcanic pebbles. It's pumped onto that container. And then the pebble container gets completely full of water and then it - all that water is flushed out. And then it gets full again and then its flushed out. Erm. And then the re-roots of our plants that leave er floating with the pebbles are getting all the nutrients that come from this 800 litre tank. And now. How do we get the nutrients? You can either add them manually. So you put your chemical or organic product on your water and that will feed your plants. Or you make a close circle and you put some kind of animal - like the chickens that we were talking before that would feed the - right - feed the vegetables. You put some aquatic animal so a fish, tilapia is quite common because er apparently they're fairly easy.

JZ: OK.

PB: And then the waste of [35:00] the fish is gonna be the food of your plant.

JZ: OK.

PB: And this is a bit of the permaculture spirit. Where everything lives in harmony. Er as a one. So the waste of A is the food of B. The waste of B is the food of C. The waste of C is the food of A. Then everything stays on a closed loop.

[35:28] JZ: Sounds - it sounds like a completely sensible and er - almost intuitive way of doing it. Why - I mean before this er - before the - we had this in this shed I wasn't familiar with aquaponics.

PB: Mm-hmm.

JZ: Why do you think it's not as well known as it could be?

PB: Mm-hmm.

JZ: Is - are there challenge around it that - that make it difficult to sort of roll out across the world as it were?

PB: Mm-hmm. Mm-hmm. So there is one very important and is energy. So this is a system that requires an input of energy that I cannot tell you exactly what it is **[36:00]** yet because we've just started. But I will set a reader - a meter. So that we know exactly how much energy we're consuming. And I think that's one of the main problems. So your water pumps require electricity it - for it to pump. Er your lights er require again electricity. They can be LED etc etc but you need an input of energy. Er and that's the first er and most direct thing I can think of. And then I guess there is as well a cost. On the infrastructure you require to start.

JZ: Mm-hmm.

PB: So this containers - plastic containers. And the pumps and the pipes and so on and so on. I dunno exactly the cost but they are probably on the thousand, couple thousand maybe. Not - I can't er say it with certitude. But it's probably that - that - around there.

JZ: Sure. [37:00]

PB: Erm. And I think those are the main - main er - main things.

[37:05] JZ: And - and this has just been set up now? Is it growing to grow something in the near future?

PB: Yes.

JZ: So what's the idea?

PB: So we've somehow erm - we've taken - so this - this project was already set up. Er when we did - when we took somehow control of it. Er so we're learning exactly how it works. Er and it does require for example you have to read the PH of the water. There needs to be a bacteria that lives in the water so that - that bacteria is the responsible of transforming the waste of the fish into usable matter for the plant. So all of these things need to work but the idea is once er we have learned the basics. So water circulation and water treatment and how to flush er the soil erm **[38:00]** tanks. Er. Flush them out properly. Then we'll start planting. And we're gonna start with leafs. Which apparently is the easiest.

JZ: Leeks?

PB: Leaves. Salad -

JZ: Oh right, oh I see, leaves, right. Got ya.

PB: - spinach maybe. Kale, maybe. No all the leafy - leafy ones. And then once you've got those ones under control you move onto your next which is tomatoes. And cucumber, courgettes, I'm assuming maybe squash. I don't know maybe we can try leeks as well, they might work.

JZ: [Laughs] Maybe I've just given you your great idea.

PB: Yeah.

[38:38] JZ: Excellent. Er and do you think there's - there's a future for this becoming more popular?

PB: There is a future for this maybe. Yeah. Maybe. I-I dunno.

JZ: Yeah.

PB: I -

JZ: This is your first time so you - you don't know for sure.

PB: I-I don't know. I don't know, I have to do m- I have to work with this for six months. Er get the data.

[39:00] Err. And then I will be able to make a judgement. I have read a lot, like I've done a lot of research but I don't think there is a clear answer.

JZ: Sure.

PB: Like I don't think anyone has the - the answer. There is another very interesting project developed by the MIT. It combines aquaponics with er computerised erm [pause] like harvesting and taking care of the plants.

JZ: Yeah.

PB: So they called - what are they called? Erm farm - computer farms. Yeah. And they are tiny boxes - like this where you can control the atmosphere inside. So you can control the temperature, the humidity - all with your phone. So you imagine you have this closed in a box and from your phone you can - OK, let's make it so we grow aloe veras y'know. So it's really hot and very dry and boom. Aloe - y'know, it's amazing.

JZ: [Laughs]

PB: Err. But again I don't know there is a lot of people **[40:00]** in the open source community which is - everyone that likes to share their ideas rather than copyright them, no. That are researching on this. So I believe it will end up somewhere. I don't know if it's on what we know yet. Something else will come.

[40:15] JZ: Sure. Sounds to me like the M-MIT have a bigger budget than Community Brain.

PB: For sure, yeah yeah yeah.

JZ: [Laughs]

PB: But it's open source. So everything that the MIT guys have done on the computer farm err - it's open source. Which means that you can just download all their data, copy their system and then improve it. It's beautiful. That's - that's the beauty about the internet and the open source movement.

JZ: That's the spirit isn't it?

PB: Yeah.

[40:37] JZ: Erm. Well I think I've got everything unless - unless there's anything else you can think of that you'd like to say on the topic of growing your own food?

PB: All good. Whatever - whatever you think.

JZ: No, no, no. I think that's great. Lovely. Thank you so much Pablo.

PB: All good. No problem, with pleasure.